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CELLULAR AND MOLECULAR GASTROENTEROLOGY AND HEPATOLOGY

COMMENTARY

Referential Obfuscation: Contemplations on the Ethics of Impact

The ethics of publication and review are often discussed, debated, and reviled, yet they are at the heart the process of peer-reviewed science that dominates our ethos of research inquiry. There are few stated rules of conduct in either the creation of manuscripts or their review, although a few concerns such as conflict of interest have received increased specific guidance. The ethics of the assembly of manuscripts and grant proposals are dominated, perhaps correctly, by issues of data veracity and appropriate presentation of figures. Still, there are other, more subtle aspects that undermine the integrity of scientific publication.

The concept of "referential incest," where authors cite only their own previous papers or those of their direct colleagues, has received some discussion. This practice can result from intellectual laziness, ignorance, or an intentional decision to ignore everyone else's results. Another symptom of intellectual laxity is the practice of citing only review articles, which *Cellular and Molecular Gastroenterology and Hepatology* strongly discourages. Citations of primary literature should be expected in peer-reviewed articles as a normal part of scientific justification and discussion.

Referential incest undermines the broad discussion of knowledge, but there is perhaps a more damaging practice: referential obfuscation, which arises from the desire to inflate or conflate the novelty of submitted research to obtain publication in journals that have higher impact factors. This practice ignores or undermines the existence of preexisting data that might reduce the impact of a communicated publication or grant. The literature is vast, so it is certainly common for investigators to inadvertently miss pertinent studies. However, referential obfuscation is different—it is an intent to deceive or confuse.

This manipulation can take many forms. A common paradigm is to avoid mentioning preexisting findings to heighten the novelty of one's own research. In a more directed manner, some omit reference to the appropriate literature in the introduction and results, only acknowledging its existence in the last lines of the final paragraph of the discussion. Although the latter practice avoids the accusation that the investigators did not mention the other studies, it relegates their results to almost a footnote. The practice can be observed in publications from highly placed investigators as well as from younger scientists, the latter perhaps buoyed by the observation that elder scientists with higher stature are using the same techniques (Figure 1).

This pattern of referencing undermines the whole concept of science as a discussion of ideas and findings. It shows disrespect for the work of others at the expense of inflating the value of a newer publication. Even though the practice is not directly proscribed, it is intellectually corrupt. By robbing the literature of appropriate discussion, referential obfuscation denies the scientific community an adequate scientific discourse and warps the literature as a whole into a competition for an impact factor-driven limelight rather than a pursuit of scientific knowledge and enlightenment. As for those whose work has been slighted by this practice, today's world leaves little recourse.

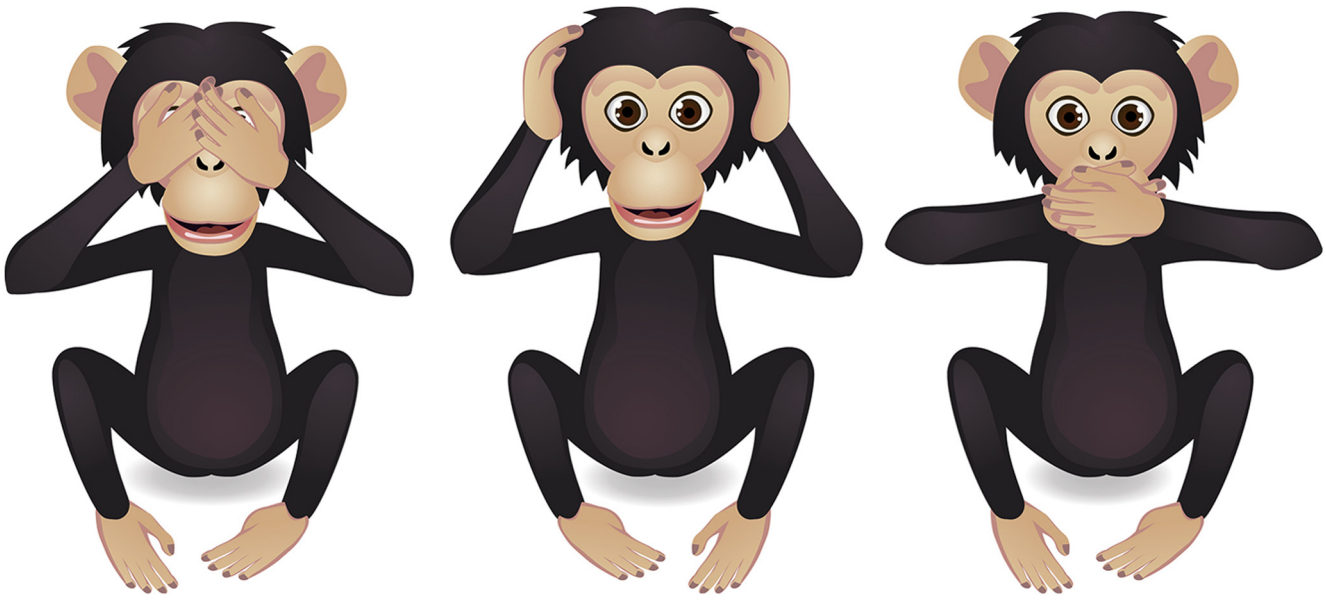

Figure 1. Referential Obfuscation: A process to inflate your own novelty by ignoring prior literature. We never looked, we never heard of it, we shouldn't speak of it.

This indictment of referential obfuscation is not meant to condone the use of data dumping, perhaps an even more common practice in the age of online publication. Data dumping floods the literature with incomplete studies that drown out the more complete and thorough investigations. Some of the motivation for these preliminary publications may stem from a compulsion to get something into press before another group publishes. Regardless of the rationale, data dumping hinders the scientific discourse as well. It is the responsibility of journal editors to discourage data dumping by publishing studies with complete investigations. It is also up to journal editors and reviewers to ensure that premature publications of preliminary findings, when they occur, do not undermine the novelty of more complete investigations.

Similarly, in this time when the reproducibility of research findings is a significant concern, publications that report findings similar to recently published studies should not be penalized for a lack of novelty. Rather, they should be encouraged as critical corroborative findings so long as they are communicated within a reasonable amount of time after the initial report (eg, within 6 to 12 months) and acknowledge and discuss the initial study in the context of their present findings. This practice enriches the literature and may work toward decreasing the practice of referential obfuscation in competitive fields.

Referential obfuscation is often a calculated risk by investigators, who hope that assigned reviewers for their papers and grants miss the lack of appropriate citations or take their assertions of novelty at face value. It is therefore up to editors and reviewers to be vigilant in identifying instances of referential obfuscation. For editors, this means promoting reviews by the highest quality referees who have a deep understanding of the relevant literature. Similarly, reviewers should penalize authors who overstate the novelty of their work not just in their results but also in their technical methods development. In the case of grant submissions, the penalty for such a practice should be diminution of priority score; in the case of manuscripts, rejection would be appropriate. In both cases, the principal authors should be admonished for attempting to subvert the peer review process with inappropriate representation of purported novelty.

Although editors and reviewers serve as traffic cops for the literature, it seems unlikely that they can identify all offenders. They are going to get fooled. Thus, because scientific practices are strongly influenced by leaders in the field, it is critical that investigators with established reputations do not resort to referential obfuscation to maintain and expand their reputations from a position of strength. Rather, these investigators should act as patrons of discussion and be at the forefront of scientific discourse. Scientists must support the open discussion of ideas, not subvert the process of knowledge creation. It is up to the scientific community as a whole to eliminate this insidious problem and restore the scientific discourse to its requisite standard. It seems unlikely that any system of penalties or sanctions can be completely successful or equitable, so the response to these trends must come from the research community as a whole. At *CMGH*, we will be working assiduously with reviewers to maintain a high level of integrity in the pursuit of the open flow of ideas that is central to the success of an active scientific community. We welcome your comments on how we may uphold these standards.

JAMES R. GOLDENRING
Vanderbilt University Medical Center and
the Nashville VA Medical Center
Nashville, Tennessee

Conflicts of interest
The author discloses no conflicts.

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